

# Fort Peck Dam



US Army Corps  
of Engineers®  
Omaha District

## *75 Years of Service*

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## The Legend, And Its Creators, Still Stand Tall

There's nothing quite so uplifting as watching a grizzled 74-year old legend stand up to the worst and most traumatic battering of a lifetime... and later seeing the legend stand tall in the winner's circle.

That's what this glorious, magnificent old dam—the Fort Peck Dam—did last year. That's what Fort Peck Dam has always done. The historic Missouri River flood of 2011 pitched a fit and threw it the biggest challenge ever. And the legend didn't flinch. Just like the dam's creators, living and dead...

And now in 2012, what better time to celebrate three-quarters of a century of service given by this venerable monolith. The millions of people it protects and the thousands who gave it birth, all stand somewhere in this great land—or beyond—in full salute.

We gather now to honor this dam and its planners, designers and builders. So many lived just to work on it and many even died so that it could stand tall and proud above the valley, deflecting all threats and providing untold benefits for millions of people in all directions.

It has stood like a sentinel for 75 years, withstanding snow, wind and rainburst, ice storms and wild, charging flows seeking to consume homes and livelihoods.

This book is like a reel of old black and white photos, racing through our mind's eye and giving glimpses of the birth of a legend, known for its proud, unyielding service and its bloody triumphs. And at the core of that triumphant accomplishment resides the mightiness of human will which graces the dam and sparked Fort Peck's spirited creators.

Take a good long look at the legend and say it... "Essayons." It means "Let us try."



**Robert J. Ruch**

*Colonel*

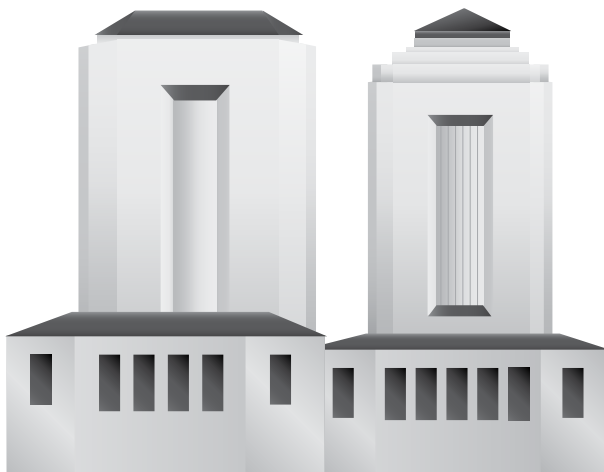
*Omaha District Commander*

A handwritten signature in black ink, which appears to read "RJRuch".

Robert J. Ruch  
Colonel, EN  
Commanding



*A man stands in the empty spillway of Fort Peck Dam (cover and above left) August 8, 1938, after construction ended, before water was released into the spillway; and the dam (above right) with water in the spillway on July 20, 1975. Flood waters (left) enter the Fort Peck Dam stilling basin on July 20, 2011, flowing through the spillway (back cover) during the historic summer flood.*



# Fort Peck Dam

## *75 Years of Service*

### 1937 — 2012

The Fort Peck Dam Project was authorized in late 1933 by President Franklin Delano Roosevelt, who hoped it would serve the dual purpose of providing jobs for a Depression-plagued workforce and providing flood protection on the Missouri River, which had been a major problem since the 1860's.

Later to become part of the famed Pick-Sloan Plan, which includes the six U.S. Army Corps of Engineers managed dams on the upper Missouri River basin, Fort Peck was not thought of by its creators in the same way it is thought of today. In those days it was considered a project of salvation which breathed new life into a populace desperate for work. They could not see, nor did they care, that one day it would be seen as a memorial to human skill, stamina and the ability to overcome hopelessness.

To grasp the size and scale of the Fort Peck Project almost defies comprehension. Numbers such as 125,000,000 cubic yards of fill in the dam, 34,000,000 pounds of steel in the cut off wall, and 53,000,000 pounds of steel in the spillway help tell the statistical tale. It doesn't however, convey the whole story.

Engineers were tasked with building the world's largest dam in a remote location with no roads, no power, and no housing, where temperature extremes of 110 degrees F to -60 degrees F were not uncommon. It became the single largest project of the New Deal, employing 10,560 at the peak of construction, nearly doubling the work force at Hoover Dam and topping Grand Coulee Dam by more than 2500 workers.

One of the most formidable obstacles faced by the workforce is described by Major Clark Kittrell, who arrived at Fort Peck in 1933 and served as District Engineer from 1937 to 1940. He wrote "no engineering job of this magnitude had ever been attempted with so short a time for planning." Indeed, the work on the dam began a mere ten days after its authorization. By the time closure of the dam was made in June 1937 so many hardships had been conquered that some who worked on the dam consider it first and foremost a monument to perseverance.

Only a dozen Army officers were assigned to Fort Peck. These men oversaw every aspect and detail of the massive and complex construction project. While the officers had to be smart, dedicated, capable leaders, admiration for the workers had to be even higher. They came from all over, lived in extraordinarily harsh conditions with few, if any, of the basic amenities taken for granted today, just for the opportunity to have a job. That these men and women, Army officers to laborers, together accomplished this incredible feat, in seven short years, is astounding.

## Standing the Test of Time

2011 is another year that will stand out in the memories of those who live and work near the Missouri River. The record rains and runoff tested the dam and the spillway as never before. It is a testament to the designers, engineers and workers who labored to build Fort Peck that it met that challenge and worked exactly as it was planned all those years ago.

# In The Beginning

Building the world's largest dam in such a remote location created many challenges and led to many seemingly unusual decisions. One of the first was to build the dam by hydraulic fill; using hydraulic fill to build a dam this size had never before been attempted. Hydraulic fill meant dredges. The dredges would be built onsite, resulting in the creation of a shipyard and the Fort Peck Navy.

Delivery time for large diesel motors the size needed for the massive dredges was two years, and the availability of fuel was inconsistent. This led to another major decision—the dredges would be powered by electricity. A 154,000 kVA power line, 288 miles long, was constructed from Rainbow Falls to Fort Peck to power the dredges and the rest of the construction.

An entire town would be built to house the workers. Roads and a railroad would be constructed to haul materials and people. At the same time, clearing operations were going on at the dam site, where more than 4 million cubic yards of material would be removed. That was a lot of work to be done before building of the dam could even begin.

*Construction of the first dredge hull began in the winter of 1934. Four identical dredges were built, each 170 feet long.*



## 1933

October 14 - Project approved by President Roosevelt under the public works program as Project No. 30 in charge of the Corps of Engineers, United States Army.

October 23 - First day of work. Clearing of brush and trees begins at dam site.

November 21 - Maj. T. B. Larkin, Corps of Engineers, arrives to take charge of work.

December 1933 - Construction of the 12-mile railway from Wiota to site started. Building begins on first bunkhouses to house ship carpenters, in area down by winter harbor.

December 18 - First earth is moved on project. Widening of railroad crossing at Wiota so trucks could haul earth to the Wiota-Fort Peck railroad embankment.

## 1934

January 1934 - Work started on bridge and trestle over Missouri River.

January 13 - Work started on the first dredge hull.

January 27 - New highway from Glasgow to Fort Peck started by Montana Highway commission. First pilings driven on bridge.





*The 288-mile power line took 14 weeks to build and required some 5,500 poles.*



*Before the roads and railroad could be built, sleds and horses hauled supplies to the dam site.*

March 1934 - Construction of Missouri River Bridge begins.

March 20 - Milk River bridge open to traffic.

April 5 - Town buildings and services started under a group of contracts.

April 12 - First pontoons launched at shipyard.

May 1934 - Work begins on diversion tunnels. Work on 288-mile power line from Great Falls to site started. Railroad from Wiota to site completed.

June 12 - First dredge hull launched.

June 19 - Work to strip base of dam begins.

July 1934 - Fourth dredge under construction.

August 1934 - Sheet pile cutoff wall started. Highway from Glasgow to site completed. Work begins on control shafts for diversion tunnels.



*To haul the massive amount of supplies and materials needed to build Fort Peck, a 12-mile railroad spur was built including this bridge across the Milk River. More than 50 miles of track was constructed to carry supplies to various locations at the dam, spillway and tunnels.*



*Grader clearing snow in January 1934 helps free the vehicle along the road between Glasgow and Fort Peck.*



## 1934

*August 6 - President Roosevelt makes first visit to project.*

*August 16 - Construction begins on the four diversion tunnels.*

*October 1934 - Bridge and trestle across Missouri River completed and opened for traffic. Town buildings and services completed.*

*October 1 - Electric power delivered at Fort Peck over Great Falls line. First trainload crosses the bridge to deliver construction materials to Mason & Walsh Co., builders of the tunnels.*

*October 13 - First dredge starts work and first material is placed in dam.*

*October 29 - Dredges B and D launched at marine ways*

*October 30 - Dredge C launched at marine ways*

*November 15 - Spillway excavation started, first contract let.*

# Early Days

## A Bit of Rough Going

Wintertime in Montana. Early 1934. Hauling material on the roads around the dam site. These words might still make grown men shudder. Regardless of the fact that Army halftracks might not have been able to grip some of the roads in those parts, the show had to go on. There was a dam to be built, and people needed the work.

Sure it was cold, miserable and snowy. Somehow, though, it still seems mind-boggling to think that timber was cut and hauled and materials transported year 'round over bad roads, and that blasting, excavating and even concrete work went on continuously.

And when the frost cleared, there stood the world's biggest dam, closing a major North American river only seven years after the project was authorized.

Clearly, they weren't horsing around.



## 1935

*November 19 - Stripping base of dam completed. Contractors moved 4,133,530 cubic yards of dirt in 153 days.*

*December 1934 - Second spillway excavation contract started.*

*December 5 - 6-mile railroad spur to spillway completed.*

*December 22 - Dredging stops for the winter.*

*January 1935 - Tunnel workers set a world record for tunnel advancement by digging 1202 feet in one month. Tunnel workers set a world record for single day tunnel advancement by digging 219 feet in the four tunnels in a single day.*

Glasgow Courier;  
December 22, 1933

### Work Continues at Dam in Spite of Snow and Cold

By Courier Correspondent

CENTER.—The work at the dam has been retarded somewhat be-

cause of snow which made the roads almost impassable. However, a large number are going through daily regardless of drifts. The men are hauling logs and wood and splitting and piling the wood already out. The heavy snow has also meant some delay in beginning bus service from Nashua and Glasgow.

Left: Glasgow Courier;  
January 5, 1934

Right: Glasgow Courier;  
November 24, 1933

### Engineers Battle Storm to Inspect Conditions at Dam

A genuine Montana blizzard was encountered by a group of army engineers from division headquarters at Kansas City who were here last Thursday on an inspection trip. They included Col. R. C. Moore, Missouri River division engineer; Capt. Theodore Wyman, Jr., district engineer at Kansas City; Col. C. W. Sturtevant, principal engineer at Kansas City, and Col. J. L. Brown. They were accompanied to the dam by Maj. Thomas B. Larkin and other engineers from the district office. In spite of the storm they made the trip to the dam. It was partly made to determine plans for a water system which will be installed at the model town.

### Montana "Breeze" Does Some Damage At Peck Project

By Courier Correspondent

FORT PECK DAM.—The Montana "breeze" that hit here Monday caused some discomfort to workers as well as some damage. Several portable camp wagons which workers are using as living quarters were blown over, as was a restaurant tent which has been established. Even the core drillers were looking around for a smokestack which they claimed they lost.

Glasgow Courier;  
January 5, 1934; Tool House  
Tales was written by dam workers,  
Chet Taylor & T.E. "Shorty" Bohan

### Tool House Tales

Partly Fact and Partly Fun  
About the Gang at Fort Peck

By CHET and SHORTY

Note: If you have any news or other contributions leave them at the tool house at the dam site or at The Courier office.

WHEN WINTER COMES  
When the wind begins to blow  
Down toward the dam site.  
And the roads are deep with snow  
Down to the dam site  
Do we get to stay in bed  
Pull the cover o'er our head  
And "let George do it" instead?  
Not by a dam site.

### WAS IT A STORM?

Well, the blizzard Wednesday night and Thursday morning certainly put a crimp in travel to the dam. Conditions around town Thursday morning were somewhat uncertain. No one seemed to want to start out, but no one wanted to be the first to stay at home. Even Spot, when he punched a hole in his radiator, had to save the hole for evidence just to prove it wasn't an alibi. Finally some of the braver ones made a start. But after bucking snow and storm for five or six miles they called it a day and came back. Too bad, but it's an acknowledged fact that Montana blizzards are to be treated with proper respect.

Shuman and his gang claim credit for being the only bunch to get in a day Thursday. We'll admit. Vic, it takes nerve to go out on a day like that.

# 1935

February 23 - A world record for tunnel advancement in a single day was set when tunnel workers advanced diversion tunnel #4 sixty-four feet.

April 21 - Dredging season started. All four dredges in operation.

May 7 - The dredges are pumping an average of 100,000 cubic yards of fill each day.

May 13 - Construction on spillway gate structure begins. Third spillway contract.

June 4 - The four dredges have now placed 4,500,000 cubic yards of fill in the dam. The two contractors excavating at the spillway have 13 shovels, 1 dragline and 100 trucks in operation.

July 23 - Freight hauled over the Wiota-Fort Peck Railroad line reaches four million tons which required 68,000 railroad cars.

August 22 - 4 barracks buildings are moved to the Fort Peck School to accommodate the expanding class sizes.

# Building The Dam

The largest dam in the world; that was what Fort Peck was destined to be when it was on the drawing table in 1933. At nearly four miles long, 250 feet high and more than 3/4 mile wide at the base, it was the biggest, by far. When only a fifth complete, it was already the largest dam in the world.

So how was it done? While clearing operations were going on to remove the overburden of trees and other vegetation, work began on a steel wall that would run the length of the dam and be pounded deep into the shale bedrock below to prevent water from seeping underneath the dam. A railroad trestle, including a bridge across the Missouri River, was built ringing the dam site to carry materials and allow for dumping gravel on the toes of the dam directly from the railroad cars.



*Two 196-foot gantry cranes pounded the steel sheet piling into the ground to create the cut-off wall. When completed, the wall was more than 12,700 feet long and required some 34 million pounds of steel. Workers set a world record, driving steel more than 160 feet into the ground.*

*September 1935 – Workers at the cut off wall set a world record driving steel sheet piling 161 feet into the ground.*

*October 1 - First spillway contract completed, with 2,535,945 cubic yards moved.*

*October 8 - Workers at the cut off wall break their own world record driving steel sheet piling 163 feet into the ground.*

*October 31 - Dredging season ended; 21,742,000 cubic yards in place in dam to date. Fort Peck Dam surpasses the fill amount at Gatun Dam at Panama, which has 21,146,000 cubic yards of fill, to become the world's largest dam.*

*November 25 - Cutoff wall completed. Over 17,000 tons of steel used.*

*December 3 - 5-mile railroad extension from the spillway to the tunnel intakes is completed.*

*December 5 - Spillway contractors shut down for the season having excavated 13, 011,765 cubic yards of material to date.*



*The overburden from the dam site was hauled away by a fleet of 250 trucks. A truck was filled on an average of every six minutes.*



*The toes, or edges, of the dam were made of gravel dumped directly from railroad cars. These toes formed the barrier for the hydraulic fill that would build the dam.*



## 1936

*January 12 - Now 2,791,000 yards of toe gravel in place.*

*January 15 - Government forces take over the work on the diversion tunnels by mutual agreement with the contractor.*

*February 1936 - Record low temperature recorded at the Fort Peck Weather station of 54 degrees below zero.*

*April 15 - Dredging season started.*

*April 28 - World record is set when the dredge Jefferson pushed hydraulic fill against a 200-foot- high lift to pump fill into the dike section of the dam. The previous record was 85 feet.*

*May 5 - 3275 people are employed at the tunnels, 1597 at the spillway, 1803 on the dam, 1080 on other areas of the project. Man hours worked since the dam began now exceeds 21,400,000.*

*May 14 - Tunnel workers set a new world record for tunnel enlargement when the tunnels were advanced 103 linear feet in a single day.*



*The railroad trestle system outlines the edges of the dam. The cut off wall is under construction down the center of the dam. The section of the river in the left and upper left as well as much of the land are now part of Fort Peck Lake.*



*Dredge Jefferson, center, and Dredge Missouri, at right, in foreground. Dredges Gallatin and Madison in upper right background. The dredges pumped the slurry through 28-inch pipelines to the dam in the background. The dredges at Fort Peck set records for both the distance and height that the slurry was pumped.*

*May 19 - One-fourth of the fill for the dam is now in place.*

*June 1936 - Construction begins on the spillway cut off wall at the lower end of the spillway channel.*

*June 2 - The total tonnage to date on Fort Peck-Wiota Railroad is 5,400,000 tons.*

*July 14 - Concrete pouring for the spillway channel is half way to completion.*

*July 15 - Peak of employment; 10,546 working employees.*

*July 21 - Emergency control shaft excavation completed and ready for emergency gate installation.*

*September 1936 - Construction begun on the 14-mile Harlem-Snake Butte railroad.*

*September 1 - The dredge, Jefferson broke its own world record by pushing hydraulic fill against 240-foot lift.*

*September 15 - The placement of hydraulic fill into the dike section of the dam completed and required 2,900,000 cubic yards of fill.*

## Dredging: A Complex Technique

Requiring vast amounts of labor and equipment, hydraulic fill dams are hellacious things to build. That's why there are so few of them. But with a dam the size of Fort Peck it was deemed that conventional earth-moving devices couldn't do the job. Another consideration was that by dredging from the upstream area, the lake could then be larger.

The dredges would scoop and suck a watery mixture of sediments, or slurry, from the bottom of the river on both the upstream and downstream sides of the dam site. That material would then be pumped through a pipeline to the dam site.

The dredges, booster pump barges, pontoons, and derrick boats were built on site. Shipbuilders from all over the country flocked to Fort Peck, to work in the biggest shipyard in Montana. Of the 34 vessels built at the Fort Peck shipyard, four were massive dredges, each with more than 12,500 horsepower. Each could dig more than 50 feet below the water surface.

*Right: A derrick boat replacing a worn pump on the dredge Missouri. Worn units were replaced regularly with minimum delay to dredging operations. Here, both pumps and the cutterhead were changed in two hours.*

*Opposite: Moving the pipeline was an endless task. Support trestles had to be built and dredge pipe had to be taken down and hooked back up every time the dredges moved.*



## 1936

October 20 - Telephone line from Harlem to Snake Butte completed.

November 5 - Dredging season ended; 50,648,000 cubic yards in place, more than half of the planned total to be placed in dam. Amount of fill placed in 1936 was 28,000,000 cubic yards.

November 18 - Enlargement of tunnels is completed. The four tunnels have a combined length of 23,828 feet. Colonel Larkin places the final bolt in the last steel ring beam.

November 23 - Spillway on the cover of the first issue of Life Magazine.

## 1937

February 1937 - Steel lining of tunnel #1 completed; over 15,000,000 pounds of steel used.

April 4 - 1937 dredging season begun.

May 10 - The first gate placed in spillway.





May 17 - Harlem-Snake Butte railroad completed. Transport of the massive quarry stone to Fort Peck begins.

May 25 - Tunnel outlet portals completed.

June 1 - The 14,000,000 cubic yard mark on spillway excavation is passed.

June 3 - Record day of dredging. The four dredges pumped 238,540 cubic yards of fill in 24 hours.

June 20 - Tunnel inlet portals completed.

June 22 - All floating plant including dredges, pontoons, floating pipe sections are moved through river channel downstream of the dam in anticipation of the closure of the dam.

June 23 - Tunnels completed.

June 24 - Closure of dam made and river diverted through tunnels. Filling of closure section started.

July 8 - Work begins on the swing bridge to borrow pit on west side of railroad tracks near the boomtown, Park Grove.

# Dredging To Build The Dam

With the aid of booster pumps, material could be pumped through 20,000 feet of pipeline with a maximum 250-foot lift. The complex hydraulic fill method also necessitated that 584 huge wooden pontoons be built to support miles of pipeline and electrical line needed to power the dredges.

The dredges at Fort Peck broke records for distance; pumping fill through more than 36,600 feet of pipe, nearly seven miles. Also broken was the record for highest lift. The previous record was 85 feet at Gatun, part of the Panama Canal complex. Fort Peck’s highest lift was more than 260 feet.

The mixture pumped consisted mostly of sand and water, with just enough clay and silt to form an impervious core in the middle of the fill.

The material was pumped just inside the slopes of the dam and was deposited between that line and the “core pool,” which was a large, still body of water in the center zone maintained for settling out the finer material.

This material then formed the most impervious part of the dam—the core. Extreme caution and care went into selecting the “borrow pits” from which the material was dredged, so that the materials forming the core and the shell of the dam met the design requirements.

# A River Ran Through It

A common question of visitors to the dam is “What happened to the water while the dam was being built?” The answer: Until the tunnels were completed, the river ran through the middle of the dam. There were two “core” pools, one on the east side and one on the west side. These two core pools were built up; the excess water from the fill flowed back into the river through spillways until the tunnels were completed in 1937. Once the water was diverted through the tunnel, the river was closed and the middle of the dam was filled.

## 1937

July 14 - Maj. Clark Kittrell becomes district engineer, succeeding Lieut. Col. T. B. Larkin.

July 20 - First trainload of quarry stone from Snake Butte arrives at Fort Peck.

August 10 - Concrete-lined channel of spillway completed.

August 17 - Swing bridge opens for first time to allow the dredge, Jefferson to pass through.

August 24 - Last spillway gate is set in place.

August 31 - More than 70,000,000 cubic yards of fill now in Fort Peck Dam.

September 7 - Last trainload of glacial boulders is delivered to Fort Peck for a total of 505,243 cubic yards.

October 3 - President Roosevelt makes second visit to site.

November 9 - The spillway gate structure is completed.



Workers connecting the newly relocated pump boat 3704 back into the pipeline. The pump boat is in the core pool, on what is now the top of the dam. Timber cut in the area that would become the reservoir was used to build the support trestles for the 28-inch pipeline.



Fort Peck Dam in 1936 showing the west and east core pools with the river open in the center.

- {1} West Core Pool
- {2} Dredge Pipeline
- {3} Spillways
- {4} East Core Pool
- {5} Tunnel outlets under construction and location of present day powerhouses

## 1938

November 19 - Snake Butte Quarry shuts down for the season. 2250 train carloads delivered to the project.

December 8 - Dredging season ends. 82,320,400 cubic yards of fill placed in dam to date.

December 31 - Man-hours on project reaches 44,369,907.

February 1938 - Missouri River Bridge dismantled. Employment on the project drops below 3,000 for the first time.

March 1938 - Snake Butte Quarry opens for the season

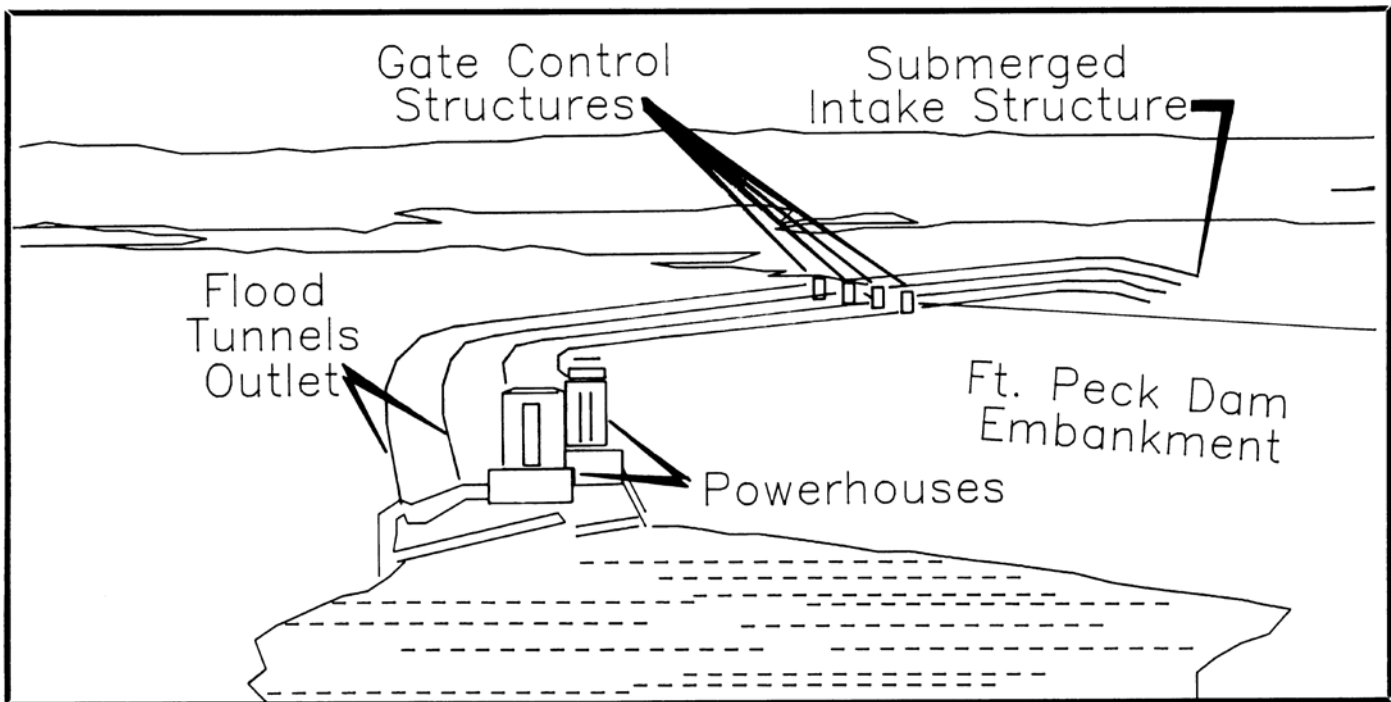
March 3 - Dredging season begins.

April 1938 - First blasting of season at Snake Butte Quarry.

May 1938 - The trash racks and inlet portals of the tunnels have disappeared from view under the gradually deepening reservoir.

May 17 - Final load of glacier boulders gathered from Saco, Hinsdale, and Malta, Mont. placed on face of dam.

# The Tunnels



The Missouri River flows through four diversion tunnels running under the east abutment of the Fort Peck Dam. How they got there is quite a story.

Gangs of workers took turns cutting into the shale with coal saws that would pivot about an axis to make a 15-foot cut. Then the material was blasted out of the tunnel, scooped into railcars and removed while more digging commenced.

This happened day in and day out. Three shifts totaling 4,000 men worked on the tunnels day and night, removing about 5 million cubic yards of material to make way for the tunnels. Residents grew accustomed to the constant noise of the blasting.

Serious landslides occurred during the excavation due to fault seams in the bedrock. The bedrock itself, known as bearpaw shale, was extremely high in water volume and some 300 yards thick. When this unique, ultra-moist shale was dried by the arid Montana air, it began to crumble. If wetted again, it took on a slick, muddy consistency with all the stability of a bag of marbles.

To keep the shale in its original state, a subsurface humidity level of at least 90 percent had to be maintained by using atomizing sprays. Despite these challenges, workers repeatedly set and then broke their own records for the rate of tunnel advancement.

## 1938

May 24, - Dam has reached an elevation of 2223 feet msl or 186 feet above normal river elevation.

September 22 - The Slide occurs. 5,000,000 cubic yards of fill slide off the upstream face of the dam into the reservoir. Eight men are killed, six still buried in the dam today.

## 1939

January 19 - Lake is now 45 miles long.

August 1939 - Dredging operations completed with a total of 122,178,000 cubic yards of fill material placed in the dam since dredging operations began in October, 1934.

August 27 - Swing bridge is dismantled and replaced with a stationary bridge.

## 1940

February 13 - Extension of tunnel # 1 steel lining to penstocks area of powerhouse begins.

March 1940 - Tunnel intake reconstruction (due to design changes after the slide complete).





*The tunnel intakes under construction in 1936. These intakes are now submerged under 200 feet of water at the bottom of Fort Peck Lake.*



*Tunnel # 1 under construction in 1936. Workers place steel reinforcing for sidewall and arch of the tunnel. This tunnel would be steel lined, unlike the other three tunnels, in preparation of a powerhouse to be built at the outlet of the tunnel.*

*Illustration on Opposite Page:  
Each of the four tunnels is more than a mile long and has a finished diameter of 24 feet wide.*

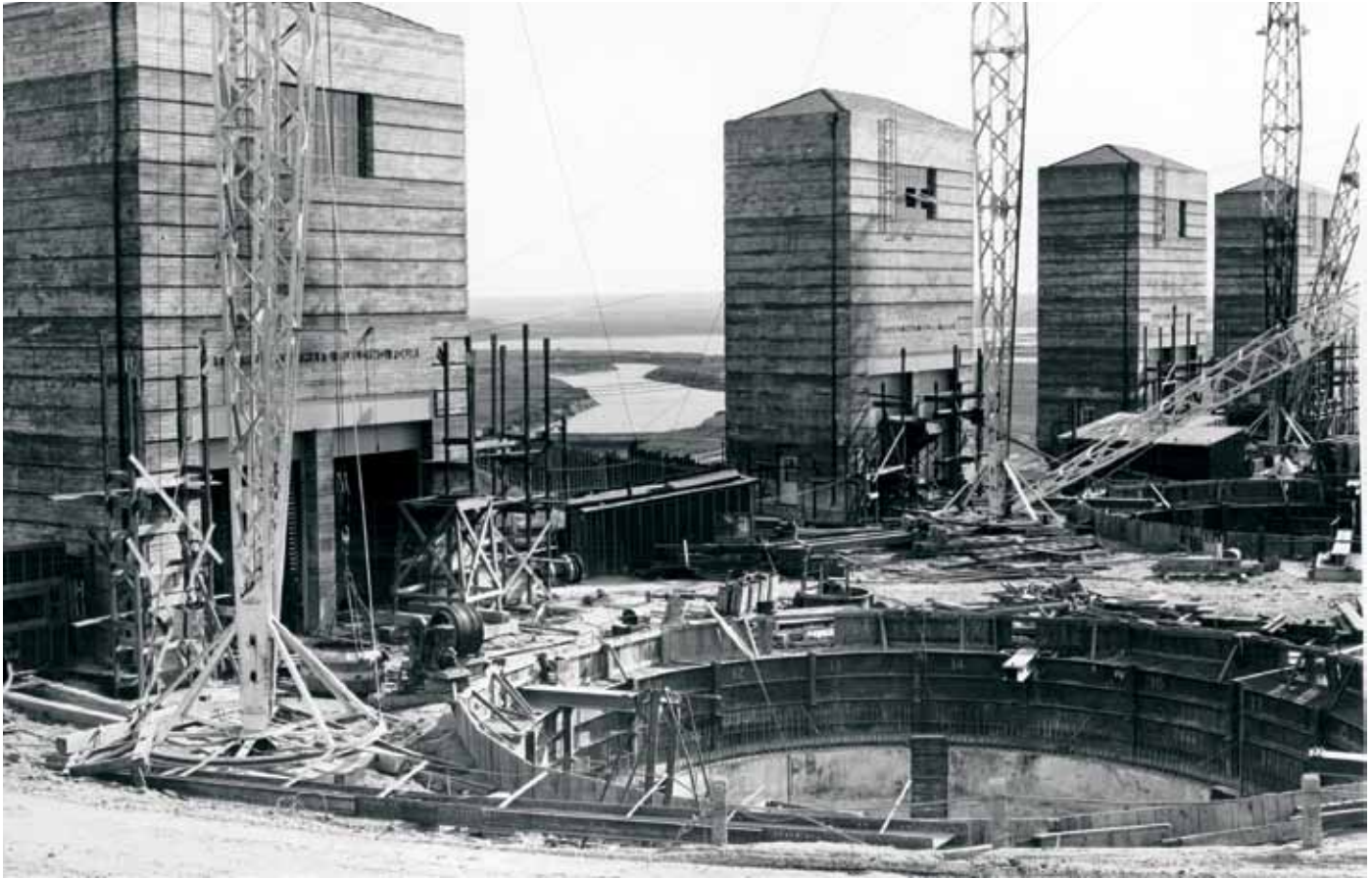
*June 1940 - Fort Peck Lake is now 50 miles long and 100 feet deep at the face of the dam.*

*June 26 - Extension of tunnel # 1 steel lining to penstocks area of powerhouse completed.*

*August 1940 - Construction of first power plant initiated and contract also awarded for manufacture of one 15,000 kilowatt and two 35,000 kilowatt capacity generators.*

*November 1940 - Topping out of dam with rolled fill earth material completed. Totals of materials in dam structure included 125,628,288 cubic yards of earth fill; 3,910,140 cubic yards of gravel; and 882,582 cubic yards of rock riprap.*







# Diversion Tunnels



Each tunnel is capable of carrying the normal flow of the river without help from the other three. Each tunnel has an emergency control shaft and a main control shaft. Control gates are located near the axis of the dam, housed in reinforced concrete shafts that extend upwards to the ground surface. Concrete structures house the electrically operated control machinery.

*Above: The tunnel outlets, on the downstream side of the dam, under construction in 1935. The tunnels were dug simultaneously from both the upstream and downstream portals. The engineers' calculations were so precise that when the tunnels met, they were off by mere inches.*

*Left Top: The four completed emergency control shaft buildings with one of the four main control shafts in foreground in 1937.*

*Left Bottom: View looking down in the control shaft during concrete pouring. This arrangement of a suspended hopper with two distribution chutes on a swivel was designed and built on the job. Each control shaft was over 240 feet deep and had a finished diameter of 50 feet.*



# Spillway Construction



While the dam and tunnels were under construction at the dam site, three miles to the east another piece of the Fort Peck Project was underway. It would not be wrong to describe the Fort Peck spillway as mammoth. At the same time, however, it is stately, a gracefully dominating concrete structure which stands tall, like a row of sentinels.

Designed to discharge 250,000 cubic feet per second, the spillway is wedged between the edges of a man-made valley which came to exist when 14 million cubic yards of the dry, lumpy terrain was sliced up and hauled away. More than 800 feet wide with 16 monstrous steel gates, the spillway's mile-long, concrete chute tapers to a width of 120 feet at the bottom of a 5.23 percent grade. The gates are 25 feet

by 40 feet and weigh 80 tons each. Some 560,000 cubic yards of concrete and 26,500 tons of steel went into the spillway structure.

If it seems odd that the spillway is located 3 miles from the dam, the reasoning is sound. Engineers of that era weren't too keen on running a spillway over a 250-foot-high earthfill dam. The terrain at the present site was deemed most suitable, and the large quantity of floodwater it was designed to discharge was another factor in determining its location.

*Above: The Fort Peck Spillway gates under construction in 1937. The incomplete spillway was featured on the cover of the very first issue of Life Magazine in 1936.*



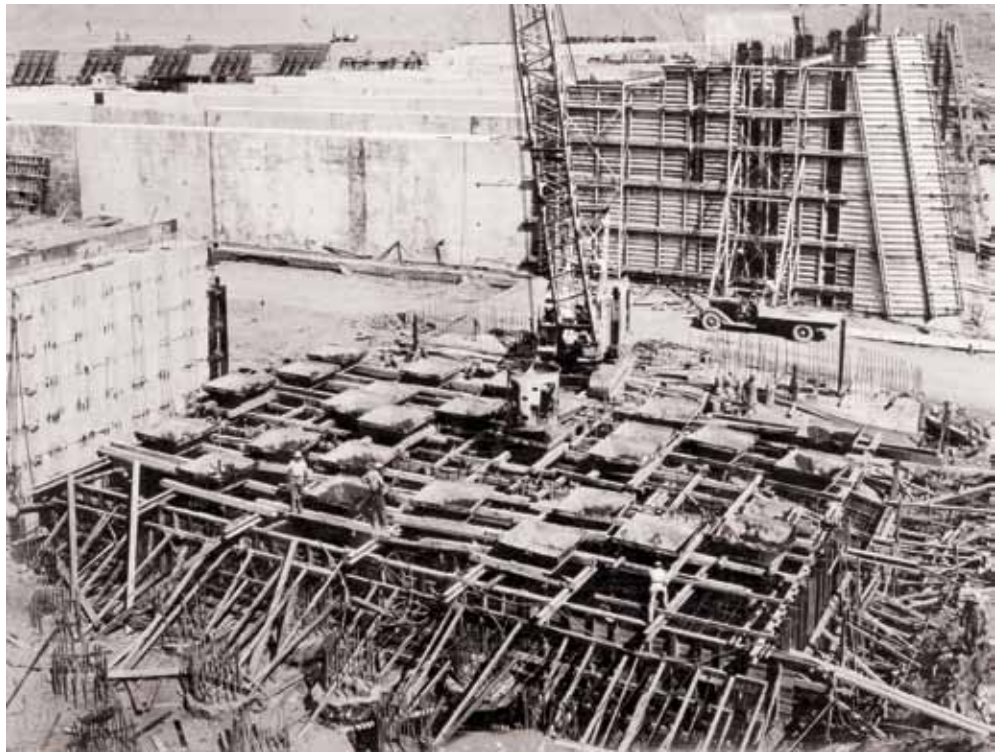
*To excavate the spillway channel, two contractors used a fleet of 118 trucks and 13 shovels. On average 50,000 cubic yards of material was hauled away each day.*



*Looking up the spillway channel in 1936, the spillway gates are under construction in the background.*



*Pouring concrete for a pier slab at the spillway gates. More than 57 tons of reinforcing steel and 1,300 cubic yards of concrete were used in each pier slab.*



*Installing the stoney gate sections in 1936. Each gate has four sections which are placed separately, then riveted and welded together. Each section weighs roughly 20 tons.*











*Above: Spillway under construction in 1937.*

*Below: Spillway in use for the 5th time in its history in June 2011 with all 16 gates open. Photo courtesy Valley County Sheriff's Department.*





*Aerial view of the Fort Peck Projects. Above: Construction in 1936, prior to the closure of the dam, and before the lake began to fill.*

*Below: June 2011, when the lake reached its highest ever elevation.*



# Hydropower at Fort Peck



Hydropower production at Fort Peck was approved by the Fort Peck Power Act in 1938. Started in 1941, construction on the first powerhouse was not completed until 1951 due to shortages of supplies and materials during World War II.

A second powerhouse was later added to tunnel #2. Construction on it began in 1958 and was completed in 1961. Today the two powerhouses average 1.1 billion kilowatt hours a year, or enough power to supply a town of 100,000 people.

*Why are the powerhouses so tall? The answer can be seen above. The high, round cylinders, visible here during the construction of powerhouse #2, are surge tanks. During normal power generating operations the water level inside the tanks is slightly below the elevation of the lake. The tanks primary purpose is to relieve pressure in case the generating unit has to be shut down quickly. If a unit needs to shut down the water that normally goes to the generator will quickly fill the surge tanks. Each tank below is 147 feet tall with a 65-foot diameter and can hold over four million gallons of water. Powerhouse #1 has three surge tanks with a 40-foot diameter.*



# Gravel from Cole



*Above: The huge gravel plant was capable of producing 100 train carloads of screened and washed gravel each day.*

*Below: Cole, Mont. boomed from a small depot and railroad siding into a town of over 1,000 people. Behind the town are waste piles from the gravel plant.*

The vast majority of the huge boulders needed for the face of the dam were quarried at Snake Butte, but gravel, lots and lots of gravel, was needed to build roads, the spillway, line the tunnels and create the toes for the dam. The approximately 5,000,000 cubic yards required came from a gravel pit near the tiny town of Cole, Mont.

A huge gravel screening and washing plant and two portable screening stations were built at Cole. A 50 kV power line was constructed to the town to supply power to the gravel plants. To wash all that gravel several pumping plants and thousands of feet of pipe were installed.

In addition to obtaining gravel from Cole, field stone was gathered and stockpiled at Saco, Malta, Tatnall, and Hinsdale, Mont., then shipped by rail to Fort Peck.









# The Quarry: Of Men, Rocks and Snakes

Beginning in 1934, the Army engineers searched throughout Montana for the large, dense stones needed for riprap on the upstream face of the dam. This riprap would provide protection against the eroding effects of pounding waves and high water.

Finding the kind of rock needed at Snake Butte, some 130 miles west of the dam site, the engineers began building a 14-mile railroad spur which would take off from the main line of the great northern railway tracks just east of Harlem. Two-and-a-half miles of switches and spur tracks were also required for loading and car storage.

The stone was loaded on flat cars handling 36 tons each. Individual quarry stones weighed from two to ten tons each, and trains were seventy to eighty cars long. Fieldstone and gravel were also hauled on these tracks from the quarry and various sites in the vicinity.

## High Line

To provide the electrical energy needed, it was necessary to build a transmission line of 50,000 kilowatts capacity from the high line of the Montana Power Company to the quarry. Pneumatic drills, large compressors and 110-foot-high derricks required much electrical power, not to mention the countless floodlights necessary for night work.

Approximately 250 men—each a specialist in his particular line of work—manned the quarry 24 hours a day, drilling, blasting, breaking down the rocks and loading them on the flat cars.

## Legend of the Butte

SNAKE BUTTE, just one of the quarries used by the engineers, was named for the many snakes—mostly rattlers and bull snakes—which made it their home. The quarry was also supposedly the home of a monstrous snake which made its home deep in the crevice of the butte. Legend has it that roving Indian parents “buried” an infant’s body on a high cliff in Snake Butte. The parents visited the burial site twice, and came one last time before moving on. To their horror, the body was gone.

In the dust near the spot where they had left the child’s body, the father discovered a trail such as might be left by a snake, but it was so big as to be unbelievable. More than a foot wide, the track led from the burial site to a deep crevice.

The Indian parents related the story to a nearby tribe, and the frightened people pressed their leader to move on quickly. A famous medicine woman was consulted and, following a night spent on the butte, she returned proclaiming a huge snake with evil powers had taken the child’s body far down into the earth as a warning to all that anyone who would frequent that spot would disappear in a like manner.

*Left: Workers at Snake Butte Quarry drilling into a boulder in preparation for blasting. Below, the first trainload of rock from Snake Butte arriving at the dam on July 20, 1937. The train contained 55 cars of field stone and 5 cars of quarry stone.*



# Closed



June 24, 1937—The most important date of the entire construction, and the culmination of the past three and half years' worth of decisions, planning and millions of hours of hard work. Thousands of details, big and small, had to be carefully coordinated to be ready for this event.

At 4:20 a.m. the dike separating the river from the tunnel intake portals was blown up and water began flowing into the tunnels. Train car after train car dumped gravel and boulders into the river below the Missouri River Bridge, placing some 20,000 cubic yards in the river in one day. The Missouri River was cut off.

A congratulatory letter was sent from the Chief of Engineers, Major General Markham, describing the closure as “a unique, delicate and highly successful engineering achievement.”

## A Feat

Although closure took place in mid-1937, the dam was not finished until 1940. The four-mile-long dam was

considered the engineering feat of its time. The dam contains 125.6 million cubic yards of fill, four million cubic yards of gravel, more than half a million cubic yards of quarry stone and a third of a million cubic yards of field stone.

The width of the base is 4,900 feet and was widened considerably following the slide of 1938. The top of the dam is 50 feet wide and stands 250 feet above the base. At the time of construction it was the largest dam in the world. Seventy-five years later it remains the world's largest hydraulically-filled dam and is now the eighth largest dam in the world.

The reservoir created behind the dam runs 134 miles long with some 1,600 miles of shoreline. With a total storage of 18.7 million acre-feet of water it is the fifth largest reservoir in the United States. (An acre-foot is equal to an acre of water one foot deep.)

*Above: In 134 minutes 140 cars of rock and gravel were dumped into the river. A derrick boat maneuvers boulders into the river to keep the gravel from washing away in the current.*



*June 24, 1937, at 4:20 a.m. the dike in front of the tunnel intake portals was blasted allowing water to flow into the tunnels for the first time. The final work on the tunnels had only been completed the night before.*



*Twenty-nine minutes after the water first entered the tunnel intake portals water flowed out of all four tunnels on the downstream side.*



# Then Came the Slide of '38



## The Slide... no one has forgotten it.

It was a quiet day, Sept. 22, 1938, and work on the dam was going at a rapid pace. The dam was within 20 feet of its crest, but there was murmuring among some of the men that something was wrong with the dam.

The daily inspection of the embankment hinted at a problem. Survey crews were deployed to assess earth movement and to inspect the core pool. (The core pool was the pool on top of the dam, into which dredge material was pumped. As the water slowly drained out of the core pool, sediment settled below, thereby forming the dam.) Although the pool hadn't moved, the

upstream pipeline shell ran lower than it should have. The day before the slide, the railroad tracks showed no signs of movement, so the work continued in the area.

By evening, the situation had changed. At least two men suspected a problem was in the offing the night before the slide.

Lewis F. Kao recalls putting in his 4 p.m. to midnight shift on the south (upstream) side of the dam.

"That night the dam had started to shift. There was a 6-foot bow in the railroad track," he remembers.



The next shift discontinued dredging in that area.

James W. “Monty” Montfort also recalls the night before the slide.

“I was foreman of a crew laying quarry stone on the 4 to twelve shift,” wrote Montfort. “We were completing a tier of stone at the extreme east abutment and were to move the dragline...the dike section at the west end of the dam.

“Water was coming up through the gravel and we could hear gurgling sounds beneath us. At 7 p.m., we began working off the mats; and as the weight of the

machine was transferred onto the gravel, it began to sink and water rushed up around the tracks.

“We moved in a bulldozer and a loadmaster and began building up with small mats. At about 11 p.m., we had managed to reach solid ground. The graveyard shift relieved us and moved out with the dragline. Our crew was muddy, wet, exhausted and glad to go home. The next afternoon, the slide occurred and the east upstream section of the dam was gone.”

*Opposite: The builders of Fort Peck Dam will never forget Sept 22, 1938; Above: Remnants of the pipeline and trestle swept away in the slide.*





On that tragic day at 1:15 p.m., as some 180 men worked in the area, District Engineer Maj. Clark Kittrell inspected the area from his passenger seat in a sedan. Something strange and terrifying occurred.

The core pool began settling and deep cracks appeared in the embankment. Suddenly, the earth started shaking, dredge pipes and railroad tracks started shifting and sinking and a massive section of the dam swung out into the upstream as if a great earthen gate hinged on the east abutment.

For ten minutes, machinery and men alike were swallowed up in the moving, muddy hell as five million cubic yards of earth slid out into the Missouri River, forming its own island.

Thirty-four men were injured. Eight men lost their lives, six of whom were never found and are still buried somewhere in the dam.

Word spread through the area quickly that the “dam was going to give,” and people packed belongings quickly and headed for higher ground. Families desperately tried to get word of their husbands and fathers working in the area. For the workers, the slide is the single most memorable event to occur during construction of the dam.

### **What caused the dam to slide?**

Soon after the rescue efforts were halted, engineers conducted a battery of complex tests to determine the cause of the slide. Samples were taken from as deep as



300 feet. A board of consultants was formed to study the problem. The board met several times studying 26 sets of technical data.

On March 3, 1939, the board returned its report, which said the slide's occurrence was "due to the fact that the shearing resistance of the weathered shale and bentonite seams in the foundation was insufficient to withstand the shearing forces to which the foundation was subjected." In other words, the slope of the dam was too steep for the material from which it was made.

The board recommended completing the dam, and work began once more, with modifications. The base of the dam was widened, thereby flattening the slope, and the embankment was raised. A reinforced concrete

wall was placed in front of the intake structures, and a protective two-mile dike was built. Instruments for monitoring pressure against the dam were installed.

The slide delayed the completion of the dam for a little more than a year, but on Oct. 11, 1940 the last load of material was dumped on the dam, topping it out at 250.5 feet.

*Opposite and above: A view of the destruction from the control gate area on the east end of the dam.*

# How They Remember That Day



*"It Made a Great Impression..." Some excerpts of accounts submitted by dam workers who remember the slide of 1938:*

## Lewis C. Archambeault

"I was to go to work at 1:30 p.m. on the day of the slide in that area, setting out stakes in the core pool. When I arrived there was nothing left, so with a long probe I started looking for dead bodies."

## Roy S. Epperson

"Beans to Bullets, Sept 22, 1938 began as a normal clear, calm day at the Fort Peck Dam Project. It was my day off as oiler on the dredge Jefferson. My wife Clara, a teacher in the Fort Peck School, had returned to school after having been home for lunch and started a pot of beans to cook, giving me orders to see they did not burn. About 2 p.m., I heard my next door neighbor rush into his apartment and in a loud voice call out to his wife, 'I am all right. The dam is gone.' He was a surveyor working in the area when an upstream portion of the unfinished dam began to slip. Another neighbor and I jumped in a car to see what we could do. When we got back 2 hours later, the apartment was full of smoke. The beans boiled dry and looked like buckshot. The construction of the dam had been set back one year."



## Erma Bell Flaherty

"I remember putting in a 12-hour shift the afternoon of the slide, cleaning mud, sand and water out of ears, eyes, noses and lungs of patients who were fortunate enough to have survived the catastrophe."

## Phillip E. Gannon

"In mid-afternoon in September 1938, I was working as a striker on a booster pump station about halfway down the downstream face of the dam on the tunnel side. After telephoning in my hourly meter/gage readings as was my custom, I looked toward the crest of the dam. The first thing I noticed was that sections of the dredge-fill line running parallel to the main axis were slowly disappearing from view, as was a long boom crane. Immediately our booster station was shut down and the dredge (Madison, I believe) was notified, and then myself and the other two members of the booster station watched more of the pipeline and more pieces of equipment move slowly out of sight, over a length of what must have been 2,000 feet. Some personnel were in evidence scurrying to safety as we saw some of the fill drop in towards the core pool. Later, of course, the 'slide at Fort Peck Dam' and its repair became a major part of USA dam construction lore. As a young engineer it made a great impression on me."





## Jean Klein

“Norbert was working in the shop below the dam at the time of the big slide. I spent a very terrifying day not knowing if he was safe and getting a few things together, ready to take our baby to higher ground if the siren blew so many times (for the alert sign).”

## Donald R. O’Connell

“It was such a terrible loss of life, and of course, the loss of valuable equipment. In conjunction with this, I helped a surveyor who lived next to me at the hotel (I can’t recall his name after all these years) write his thoughts after being caught in the slide. He was in the onslaught of equipment, debris, water, etc., but miraculously survived. He came through this terrible accident holding onto his transit and with only his shirt collar left around his neck. All the rest of his clothes had been torn off. I guess God was looking over him. Wish I could recall his name, but I can’t after all these years.”

## Harold J. Ruckman

“An experience of Manson Bailey: On the day the ‘dam went out,’ Manson Sr. was doing his work as a survey chief, on the area which slid out into the lake. I must refer to some of the engineers that were present in that work at that time for a full description of the

magnitude of that disaster which moved a mountain of earthfill some  $\frac{3}{4}$  of a mile long and  $\frac{1}{2}$  mile wide. I was among the first crew which was chosen to investigate the area, this under the supervision and leadership of N. N. Fuller, the safety engineer. We walked over the area looking at everything visible which might reveal factual information. We passed the bed of a truck which had been torn from its truck, then above that some 200 feet there was a pair of tan trousers with the belt attached and a leather purse in the rear pocket containing cards and ID belonging to Manson Bailey Sr. (Manson Bailey was a very well known person—he was a personality). The next day Manson Bailey shows up for work, however, he was a bit reluctant to talk of his experience. N. N. Fuller related that Bailey admitted that he had gone down under the sand several times while the earth fill was shifting and moving. He stated that he found himself on the top and was completely naked. His ears and eyes were packed full with sand. Then he climbed the west end of the slide and walked the road toward Glasgow. On arriving on a portion of the road where traffic was moving, he thumbed a ride to his home in Glasgow. An interesting thing brought this all back to my attention after I retired. I was visiting the Glasgow museum, say in the 1970’s, and found Manson Bailey Jr. attending the museum. On mentioning the above incident, he seemed surprised and said he was unaware of any of the above stated facts.”

*Opposite Left An overhead view of the dam showing the damage caused when 5 million cubic yards of earth slid out into the newly-forming lake during the slide.*

*Opposite Right Repair work underway in the slide area in October 1938.*

*Above: Brains and determination reduced the catastrophic effects of the slide to a frightful and tragic memory. This photograph, taken October 11, 1940, the day the final topping of the dam was completed, represents victory for the dam builders, who overcame adversity to achieve the final goal. Fort Peck was there to stay.*



# Fort Peck's Buildings

The Fort Peck Theatre, seen here in 1936, had seating for 1,209 people. Admission for the show was 40 cents for the main floor, 30 cents for the balcony and ten cents for children.



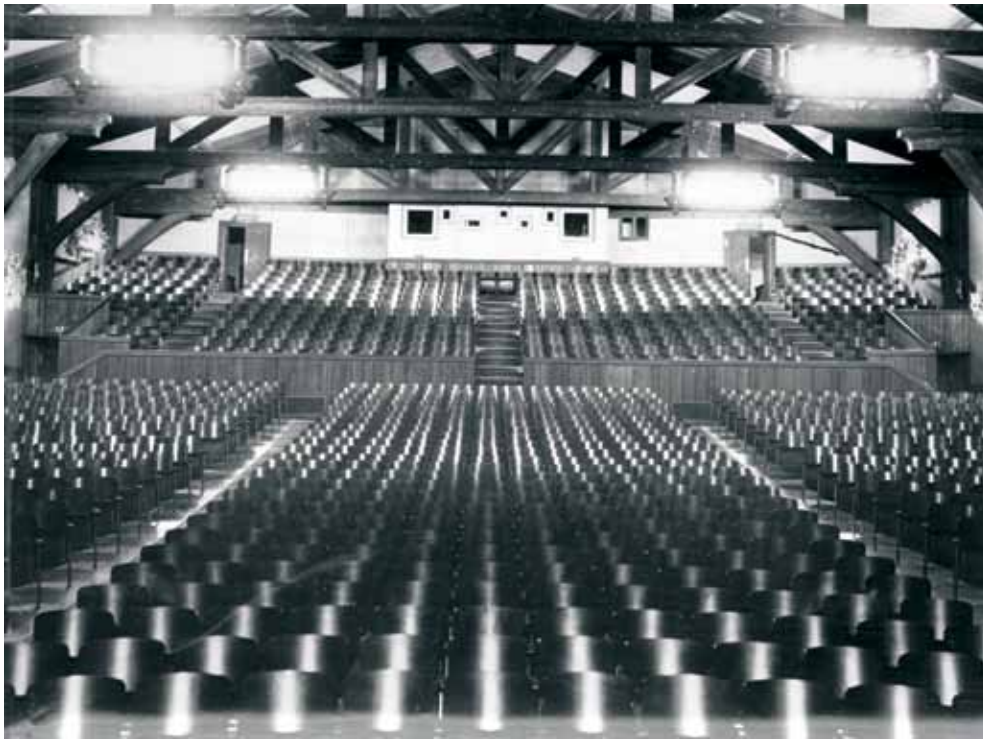
## Lasting Treasures

The buildings that remain from those early days of Fort Peck are replete with rustic memories that almost emanate from the rough-hewn timbers in the Fort Peck Hotel, or sing out from the stage at the Fort Peck Theatre, or echo in the hallways of the Administration Building. These sturdy structural survivors, along with others, such as the Recreation Hall and permanent houses on “Big Shots Row,” are links to another era.

The Fort Peck Theatre opened in November 1934 and was a recreational hot spot, with plays and movies running 24 hours a day, seven days a week. Today the theatre is owned by the Fort Peck Fine Arts Council and has been remodeled to enlarge the stage for the popular live stage shows performed there each summer.

Glasgow Courier,  
February 2, 1939





*View from the Fort Peck Theater stage in 1935.*



*Theater goes await the beginning of a play in more recent years. Photo provided courtesy of Fort Peck Fine Arts Council.*

Right: The Recreation Hall in 1936. The hall is still in use today and serves as the town hall as well as a recreation center.

Opposite Page: The Fort Peck business district (clockwise from top); The Green Hut Café was a popular eatery in Fort Peck; An inside look at Vornholt's Drug Store's busy lunch counter.

Picture donated by Mary Moylan; Members of the Fort Peck Players, an amateur acting troupe comprised of Fort Peck townspeople, at a play presented at the Recreation Hall in 1937; A scene from the November 1936 ball held at the Recreation Hall celebrating the completion of the diversion tunnels.



## Recreation

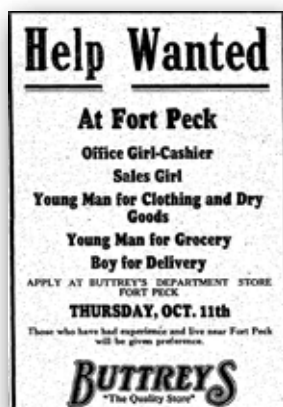
The Recreation Hall, along with the theater, was the center for activities and entertainment during the construction of the dam. Dances, church services, plays, banquets, and boxing and wrestling matches were some of the many activities held at the recreation hall.

## The Business District

An eight-store business block was built along Missouri Avenue across from the theater. Concessionaires bid for the stores and in October 1934 the stores opened to provide goods and services to the new town of Fort Peck. The stores included Buttrey's Grocery Store, Fort Peck Meat Market, Buttrey's Department Store, Vornholt's Drug Store, Kearney's News Stand, Norman's Barber and Beauty Shop, Lucke's Shoe Store, and Stewart's Dry Cleaners. The Texaco Oil Station was across the street. Later the Green Hut Café was built to the south.

Left: Glasgow Courier, October 5, 1934

Right: Glasgow Courier, May 2, 1935







*Top: The Administration Building in 1937. The building served as the main offices for the engineers and Army officers. Today the building still serves as the main office for the U.S. Army Corps of Engineers.*

*Bottom: One of the nine blocks of barracks built for the workers. One block consisted of 16 barracks buildings, two bath houses and a mess hall. Each barracks building housed 24 men. Each mess hall could feed 384 men at a time. At the peak of construction the commissary made 12,000—14,000 sandwiches each day.*

*Opposite: Four of the twelve permanent homes (top row) built for the officers of the Corps of Engineers. These 12 homes, along with the Administration Building and hospital, were the only buildings designed to be permanent. Today these homes are privately owned. Two of the seven different designs (center row) for the temporary residences built in Fort Peck. Interior (bottom row) of a bunkhouse.*



## Housing and Administration

In addition to the theater, the Recreation Hall, hotel, Administration Building, town garage and Original Houses District are all listed on the National Historic Register.

Just as significant as the buildings which remain are some of those buildings which didn't survive. These included the bunkhouses, mess halls, and the temporary homes. The town to house the dam workers was built in the summer of 1934, with most of the housing being of the temporary bunkhouse or dormitory variety. Some 298 temporary homes came in seven sizes and in any one of 36 floor plans with several color schemes to avoid monotony.

Unfortunately, a problem cropped up when the Corps assumed most dam workers would be single. Thus only 300 family residences were built. Considering that Montana state law gave hiring preferences to married men with dependents, it created quite an issue for workers with families.









*Above: The town of Fort Peck in 1936.*

- {1} Homes of Army Officers*
- {2} Administration Building*
- {3} Hospital*
- {4} Employees' Hotel*
- {5} Recreation Hall*
- {6} Theater*
- {7} School*
- {8} Barracks*

*Below: The Fort Peck School in June 1935. The school opened in September 1934 teaching grades 1-8 with an enrollment of 213. In September 1935 four barracks buildings were moved to the school to be used as additional classrooms. In 1937 two more barracks were added when enrollment peaked at 500 students.*





## Fort Peck Hotel

The Fort Peck Hotel is not covered with latex paints or wallpapers of today. It has the same look of rough timber and stained wood as it did when it was built in 1934. Initially built for short-term guests and government workers, the three-story, 55-room hotel cost \$15-40 a month.

The hotel had two large wings attached at both ends of the hotel. Each wing had 20 rooms. These wings served as dormitories: the men had the east wing and the women the west. Later, two more dormitories were built to the back of the hotel to provide more rooms for female employees. The hotel held daily meals and dinner specials served in the dining room on the main floor.

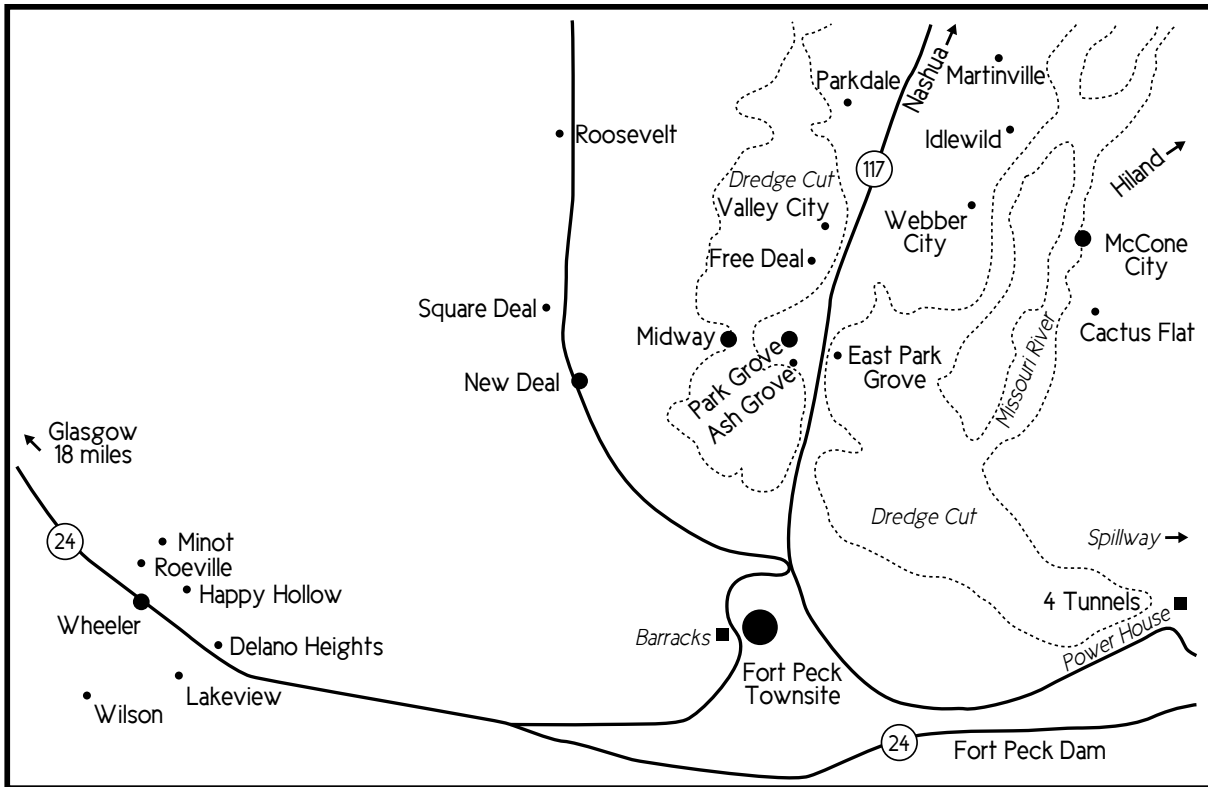
*Above: The Fort Peck Hotel in 1936. Today the hotel is privately owned. The two wings on either side are gone as are the buildings to the back which were the women's dormitories.*

*Right Center: Junior Prom banquet at the Fort Peck Hotel in 1939.*

*Right Low: Employees of the Fort Peck Hotel in 1938.*



# Boomtowns

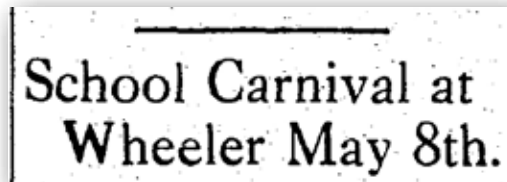


In that first year, about three-fourths of the workforce consisted of family men. With no room in the town, many families rented space from nearby landowners and threw together tarpaper shacks or small cabins.

Thus were born the “boomtowns,” more than 18 of which sprang up in the vicinity of the dam site. Many had names reflecting the times—New Deal, Square Deal, Wheeler, Roosevelt and Delano Heights. Some of the boomtowns became quite large. New Deal grew to roughly 3,000 people while Wheeler’s population peaked at 3,500 residents. McConc City, east of the river, topped out at 3,600 and although it is long gone, it is still the largest city to ever exist in McConc County. Others were small, just a handful of houses. Some grew into other towns, while a few, like Midway and Valley, disappeared altogether when the land on which they sat was dredged away to build the dam.

Despite the notoriety it achieved—thanks to articles in Life magazine and by famed correspondent Ernie Pyle—life in the boomtowns was not all wild. Make no

mistake, the wild life was there with bars, illegal back room gaming and a brothel area known as “Happy Hollow”.



But most families couldn’t afford the wild life - it was all they could do to feed and clothe themselves. Most towns developed schools and held church services. Grocery stores, gas stations, cafes, beauty shops and dry goods stores catered to the workers and their families. Bridge and whist clubs were common, sewing groups, ladies aid, and other civic groups were formed to help those in need. Girl Scouts, Boy Scouts and 4-H clubs as well as sports, school dances, carnivals and traveling circuses kept kids and families entertained.



# Circus Coming

4 - Big Rings - 4  
June 10  
TO  
Wheeler



A limited number of reduced price tickets may be purchased only at Buttery's Store. Children - 25c. Adults - 40c. Bargain Prices for This Day and Date Only if You Clip This Coupon.

Regular prices on Circus Grounds unless you have a coupon or reduced price ticket.

Children 40c. Adults 65c.

"Not The Biggest Circus but One of the Best."

Clip This Coupon and Save Money.

Hundreds of Free Seats! Choice Center Section Reserved Seats Extra.

## 5-Pole Big Top

Hundreds of People. Acres of Canvases. All Tents Waterproof.

### PRESENTING

The Sensation of 1898. Capt. Matt Laurch

And his group of Savage Nubian Jungle Bow Lancers.

THE THRILL OF A LIFETIME

THE McCUNE GRANT

OUTSTANDING and Stellar Comedy Horizontal Bar Act.

FUKUSHIMA

JAPANESE FOOT JUGGLERS

Canine Performers

Equine Stars

RUTH—One of Captain James Kolar's Elephants

The only Musical Debent in the world, dancing and playing harmonious at the same time

WORTH THE PRICE OF ADMISSION ALONE

20 Funny Clowns 20

AND MANY OTHER ACTS

OUR MOTTO

More Circus for Less Money

The Circus Supreme

AND THE CLEANEST IN AMERICA

Seldom equaled in its field

and never excelled

4—Big Rings—4

One day only

Wed., June 10

2:00 P. M. ... 8:00 P. M.

DOORS OPEN AT 1:30

AND 7:30 P. M.



A home in the boomtown, Midway.  
Photo donated by Heidi Olson.

Far Left: Ads and announcements  
from the Fort Peck Press in 1935.



One of the boomtowns exact  
location unknown. Photo donated  
by Royston Kelleher



The Happy Hollow area of the  
boomtowns. Photo courtesy of  
the Lewis Kao family.



The Bar-X in Valley was one of  
the rowdier establishments in the  
boomtowns.

Opposite Page: Fundraising  
activities were common. Fort Peck  
Press April 30, 1936.

Residents lived without electricity, running water or indoor plumbing. They bought well or spring water for a penny per gallon. They suffered through temperature extremes of 110 degrees above to 60 degrees below. Homes and businesses were often moved from town to town, and when the dam was finally complete, they were dragged back to family farms, sold off or torn down.

Looking around today, it is hard to imagine 50,000 people spread out through the town of Fort Peck and the boomtowns. Only remnants of the boomtowns remain. Wheeler's Buckhorn Bar and Park Grove remain, but for the most part the businesses, homes, and buildings live only in photographs and memories.

*Right Top: Interior of a McCone City home. Photo donated by Pamela Roepke Lovell and Patricia Roepke Crouse.*

*Right Bottom: The Ferdinand Funk family home in Park Dale. This home was moved to four different boomtowns during the construction before finally being moved north of Frazer, Mont. in 1946. Photo courtesy of Betty (Funk) Brandt.*

*Opposite Top: Dredge pipe running through McCone City in 1939.*

*Opposite Bottom Left: Homes in McCone City. Photo donated by Mary Moylan.*

*Opposite Bottom Right: Boomtown home, location unknown. Photo donated by Heidi Olson.*









# Wheeler



Probably the most well-known of the boomtowns, Wheeler was located on the highway between Fort Peck and Glasgow on the west end of the dam. Wheeler grew so fast that the owners, the Fraziers, opened a land office and showed lots around the clock.

*Below Left: Fort Peck Press January 2, 1936. With electricity, 100 party line telephones, a bus line, a post office and a police station, Wheeler had more amenities than most of the boomtowns.*

*Below Right: The Hotel Wheeler was so busy that rooms were rented for eight hours at a time. A room cost two dollars, or a cot in the hallway cost one dollar. Photo courtesy of Frank Pehrson.*

**LIVE IN**  
**wheeler**  
**The best Dam Town**  
 Where you have more  
**CONVENIENCES**  
 Hi-Way,  
 Postoffice,  
 24-hr Electric Service,  
 Bus Line, Phones,  
 Free Wash water at our dam  
 2 Theatres, Airport, Ice, Coal  
 Many Modern Stores—Lowest Prices  
 Spring Water daily (5 Tanks)  
 3 Months Lot Rent \$2; thereafter \$2.00  
 per month for Flood or wind sufferers  
**FRAZIER**





*Street scenes of Wheeler showing some of the more than 60 businesses that sprang up seemingly overnight. Photos donated by Heidi Olson.*



*The Casino was a popular dining room and hotel in Wheeler. Photo donated by Mary Moylan.*



# New Deal



New Deal began in April 1934, when workers asked to put homes on land belonging to the Whisennand family, two miles north of the dam. By June 1934, it was growing at a rate of four new homes a day and had a population of 500. Lots were rented for \$2 a month. Businesses sprang up, a light plant was installed and eventually a post office and even an airport were built. A part-time deputy was needed, due to the fast growth of the town. By 1937, with the dredges moving through the area and several phases of construction complete, people began to move out. By 1940 nearly everything was gone, and today nothing of New Deal remains.



*Clockwise from Upper Left: New Deal boomtown. Photo by Lewis Kao; Some of the 50 businesses that were built in New Deal; New Deal homes; A New Deal home; A New Deal home. All photos donated by Heidi Olson except where noted.*





# Park Grove



*Above: Main road through Park Grove. Photo donated by Mary Moylan.*

Park Grove was developed on land owned by Soren “Sam” Nissen. The Park Grove Bar, which still exists today, used to be his home. The town got its name because the residents parked near a grove of trees. The population reached nearly 3,000 people and 50 businesses prior to 1937, when the dredges started eating away at the land, turning Park Grove into a tiny peninsula. Most of its residents and businesses began to haul their homes and buildings away—most but not all. Park Grove is the only boomtown that still exists today.

*Aerial views of Park Grove. Above Left: Looking south in 1937 after the dredges started digging up the land that was once part of Park Grove, Midway, and Valley. Above Right: Looking north in 1935.*

*Below: Frances & Laverne Friedt in front of their Park Grove home in 1935. Martin Friedt worked at the government bakery. Photo donated by Laverne Friedt McComas.*

*Below: A row of homes in Park Grove. Photo donated by Heidi Olson.*





# FDR — Montana's Savior



President Franklin Delano Roosevelt knew much about what it was like to be popular. Had he ever experienced lingering doubts about his popularity as president, though, the solution would have been to hop on the train and visit Fort Peck, Mont. in the '30s.

For FDR was a savior whose mere signature put nearly 11,000 depression-bled workers on a payroll, thereby allowing thousands of families—not to mention thousands of merchants, landowners, and saloon keepers—to eat once again.

He visited Fort Peck twice during the construction, first in 1934 and again in 1937. He was greeted, and cheered, by thousands both times. Above he addresses the crowd at Fort Peck from the back of a train car.



# The Men Behind the Dam



To build the world's largest dam, a massive spillway, and construct four diversion tunnels around the dam, simultaneously, was an astounding achievement. To handle all the challenges, oversee all the technical innovations required and to keep everything on track took a massive effort on the part of everyone involved from the workers to the Army officers charged with overseeing the work.

Major Thomas B. Larkin, a Silver Star recipient for his service during World War I, was named the District Engineer of the brand new Fort Peck District in November 1933. A position he held until he left for War College in 1937.

He was succeeded at Fort Peck by Major Clark C. Kittrell who had been his second-in-command from the beginning. Kittrell was District Engineer until June of 1940 when he was reassigned to the New Orleans District.

*Above: Kittrell was promoted to Colonel during his time at Fort Peck. He left Fort Peck to become the District Commander of the New Orleans District before serving in World War II. He was awarded the Distinguished Service Medal for his service during the war. He later became the Upper Missouri River Division Commander for the Corps of Engineers.*

*Right: Larkin was promoted to Colonel during his tenure at Fort Peck. He went on to work in the Panama Canal Zone and served in Europe during World War II. He was awarded the Distinguished Service Medal in 1943. He later became Quartermaster General of the Army, then the Army's Director of Logistics and promoted to Lt. General.*







# Swing Bridge



In 1937 the dredges had dug up the all the suitable fill near the downstream area of the dam. Engineers located a large area with suitable material east of the railroad line near the boomtowns Park Grove, Midway and New Deal.

To access the area, a first-of-its-kind swing bridge was built across the existing railroad tracks. The bridge was built on site and was made mostly from materials already on hand. First raised by hydraulic jacks and pivoted on rollers, the bridge was opened by a tractor pulling on cables.

It took four men to operate the jacks lifting the bridge off its supports, and two tractors pulling cables in

opposite directions to pull the bridge open. The entire process took about 15 minutes. The process was reversed to close the bridge. After the dredging in the area was completed, the swing bridge was no longer needed. It was dismantled in 1939.

*Above: Derrick boats lifting the 120-foot bridge into place in August 1937. Work began on the bridge on July 8, 1937 and was finished by August 16, 1937.*

*Left: Opening the swing bridge for the first time on August 17, 1937 to allow the dredge Jefferson to pass.*

# Things Weren't Always on Track



To think that a four-mile-long dam constructed of hydraulic fill could be closed in the short span of three years implies that all must have gone smoothly.

Operating in the Montana mud wasn't always easy as demonstrated by the overturned dragline operating at the cut off wall area of the dam in late 1934 (above).

The entire town of Fort Peck was built in six months. For the most part everything went as planned except when a plumber accidentally spilled a bucket filled with

hot asphaltic paint causing a fast spreading blaze that burned the nearly-completed hospital to the ground in September 1934 (upper right).

As if learning to effectively operate the "modern equipment" of that day wasn't a big enough challenge, sometimes even the best laid plans (lower right) jumped the track. These gravel cars overturned at the spillway site in September 1937 when a string of 37 unattended cars rolled down a grade near the gate structure.







# Just the Thought Sent Them Fleeing



It may be standard operating procedure for the U.S. Government to fingerprint its employees, but that doesn't mean it set well with all the dam workers at Fort Peck.

"There were all kinds of men at Fort Peck," recalls a man who worked there in the '30s. "Some were troublemakers, thieves...no one is sure where they came from."

No one knows where some of them went, either, for a good number of them got out of town when it was announced fingerprinting time was near.

*Employees gather in July 1936 to be fingerprinted in the Personnel Office, which was then attached to the Administration Building. Knowing resistance was useless, many just got up and left, perhaps to protect their secrets of the past. Some estimates put the desertion rate at 10 percent, and one foreman claimed he lost more than 100 men overnight following a fingerprinting session.*

# Stories of Dam Life

The Fort Peck area swelled to a population of over 50,000 people during the construction. Many have shared their stories of life during the construction era.

## Wilber “Wib” Dolson

Wib came to work on the dam in 1934, hauling steel to the center of the dam for the cutoff wall, and also moving lumber with a Caterpillar. He later pushed a wheelbarrow in and out of the tunnels, but quit because his height made it uncomfortable there.

Wib recalls there were “lots of fights,” and “some real rough characters” working at the dam.

He also hauled water and sold it to area residents. “Those were hard times...it was such a great chance for me, getting that job at Fort Peck...”



## Frank Pehrson

Frank Pehrson’s family came to Fort Peck from Alamo, N.D. in 1934. His father, John Pehrson, was looking for somewhere to have a new business, which is how the family came to Wheeler. His father got a loan from the government and started a hotel in Wheeler for no money down.

The Hotel Wheeler was on the west side of the highway in the “good” part of town. The hotel was so busy that rooms were rented for a period of eight hours only. The cost to rent a room was \$2 for eight hours. A canvas cot could be rented for \$1 to sleep in the hallway.

Frank Pehrson lied about his age to get a job at the project when he was 15 years old. He worked for the commissary for one of the spillway contractors. He worked seven days a week, six hours a day cleaning their barracks and making beds for the spillway workers. He earned \$9.42 a week plus room and board. He held this job from June 20, 1936 to Oct 1, 1936, when he left to finish high school.

After graduation he went to work driving trucks hauling workers and supplies. In 1940 he operated a dragline shovel during early powerhouse construction. He went into the service in 1942 and got out in October 1944.

*Frank Pehrson, at age 15, left, and a friend, outside the barracks they cleaned in 1936.*

## A.B. “Walt” Waltenspiel

Waltenspiel worked at Fort Peck for five years and lived in a room at the barracks; Walt recalls the sheer “enjoyment at being totally on my own, with a job and a regular paycheck for the very first time.”

A prankster, some of the adventures initiated by Walt was nailing roommates’ shoes to the floor while the unsuspecting “pal” was sleeping off a rough night in town. Placing the hand of a sleeping party pal in warm water was a common practice as was short sheeting of beds. Cutting up rubber band and mixing them in the pipe tobacco of a stubbornly incessant smoker usually persuaded smokers from further fouling the air of the tightly sealed barracks, which were often crowded on days when it was too cold to work.

He also recalls bash-the-wall-in football games played in the barracks, which abruptly became extinct when management withdrew the damages from their paychecks.

## Lorraine Topness

*Excerpts from “The Cottage” A Tribute to My Mother, Lorraine Topness” by Robert Topness*

In 1937 my oldest brother and my parents moved west from North Dakota in search of jobs. They arrived at Fort Peck Dam after having heard that jobs were available. They found work as janitors each earning \$20 per month. Later on my dad found a second job as a truck driver.

Their first house was a shack Dad built using the scrap lumber from the large machinery sent for the dam. The shack was built on skids and Mother had it moved three times before she found a location to her liking (at Park Grove).

Originally the shack was 14 by 16 feet with tar paper covering the outside, Celotex for insulation, and linoleum on the floor extending up the walls about four feet. A kerosene heater kept the shack warm while a wood stove was used for cooking.



Above: The Topness home at Park Grove (top). The back of the Topness home (bottom). Photos courtesy of Robert Topness.

Temperatures recorded during the time we lived there ranged from 112 F to -62 F. Later Dad added a small bedroom and a garage for their first car (the car cost \$12). My brother was born in the shack in 1939. I was born in Glasgow in 1940 because Dad did not want “to go through another harrowing birth” in the shack.

In about 300 square feet lived two adults and three young boys. When the grandparents visited (sometimes both sets), the “women slept in the beds, men on the floor, and kids wherever they fit.” This tar paper shack was the “cottage.” As Mom reminisced about the “cottage” her eyes lit up and she had a big smile on her face. She remembered this period of her life as being “good times” and she had a big smile on her face. She was with her family and surrounded by friends who were in the same situation as we were. They played cards, went to dances in the surrounding towns, and generally existed as a close knit community in a time of desperate needs.





*The Funk family in front of their home in the boomtown, Valley in the mid 1930's. Photo courtesy of Betty Brandt.*

## Elizabeth “Betty” Funk Brandt

*Excerpts from “A Great Childhood at the Fort Peck Dam Site” by Elizabeth Brandt.*

Due to the Depression, my father, Ferdinand J. Funk, had to give up his farm north of Nashua, Mont. and move his family of eight into Glasgow in 1933. My father was on one of the very first work crews in October 1933. He rode on a crowded truck to go to the dam site to remove brush – oh so grateful for this job!

In the spring of 1934, Dad built a two-story house in New Deal. We thought it was so large, coming from a two-room home; so my mother took in boarders with curtains to separate rooms. Mom always had her chickens and milk cows, so she sold milk for 10 cents a quart.

To help supplement the income, my brother, Ed, lied about his age and got a job digging the basements of the Corps majors and captains (permanent houses that are still there). Eddy, using a pick, hit into a stick of dynamite which blew him out of the basement. He was blind for six months in a hospital in Minot, N.D.

“Free Town” (Free Deal), later called Valley, offered free rent because this area would be dredged out in time. So, Dad moved our house to Valley. I remember this town to be wild. famous, X-Bar-X was only about 1½ blocks from our house. We could hear the revelry all night. When the dredges started to eat away at

Valley, Dad again had our “big house” moved farther north to Park Dale. While we lived there we had electric light bulbs in the ceiling which was so great!

I will always remember the slide. A kid who had skipped school burst into the classroom and yelled “the dam slid”. The teacher told us to run for home. My parents and some neighbors had loaded some bedding onto our truck and were just pulling out for the hills, and that’s where we sat for a few hours.

In 1940 it was time to move our house again as the dredging was getting too close to us. This time the “big house” was moved into Park Grove by some trees.

Over the years my dad would take the Civil Service exams for a better job. He went from clearing brush to blacksmith worker, drove a gas truck for the Project, he even was a chauffeur at times for the Corps. Then he became a guard on the spillway – in the tower there. One day he came down the steps in the tower, a rattlesnake waited, and he finally got to use his gun.

In 1942 Dad and Mom left the house in Park Grove and moved into the town of Fort Peck to finally enjoy running water and an indoor toilet.

## Chuck Johnston

When word of the big dam circulated, Chuck’s father ventured that direction and was one of the first 50 hired at the project site. A World War I veteran, he took a job on a dredge, and Chuck would follow in his footsteps a short while later. To improve on his half-dollar an hour wages, Chuck later took a job with a contractor and helped clear the dam site. A job he held for two years. He later became a photo lab supervisor with the Corps of Engineers.

## Manson Bailey Jr.

His father worked on the construction of the spillway in the early days. “Dad was in the Materials Section and was responsible figuring and ordering materials for the spillway. Dad was proud because there was very little in the way of materials left when the job was complete.”



Bernie Erling Jim Don

Bernie Mohn at left and Donald Mohn on the right along with some friends at Fort Peck. Photo courtesy of Donald Mohn.

## Donald Mohn

*Excerpts from letter sent to Fort Peck Interpretive Center by Donald Mohn.*

In the fall of 1935 my brother Bernie and I signed up as laborers to work in the tunnels at Fort Peck Dam. We got \$.50 an hour. We stayed in the barracks that winter.

The first night on the job we were called out to help lift an electric locomotive off a fellow worker. The locomotive ran in and out of the tunnels. The fellow worker died on the way to the hospital.

Early in 1936 my wife Mary and infant son Duane joined us. We rented a house in Wheeler behind the

highway bar. We paid \$25.00 a month rent and bought water for one cent a gallon delivered daily. There was no inside plumbing. At times we took a 10 gallon milk can and went for water which we used for our washing. Washing clothes was hard work as we did it on a wash board in a tub. You didn't need to jog or run for exercise.

Shortly after working as laborers my brother and I asked to be transferred to the welding department as helpers. Our request was granted. We each were assigned a welder. My welder was Jim Webster. We got \$.60 an hour for being helpers. That was the start of our welding careers. We wanted to become welders so we rented a welding machine in Glasgow, Mont. and went there to practice in our spare time. We practiced until we were good enough to pass our welding test at Fort Peck. After we passed the test we were made welders and got \$1.20 an hour.

## David Cook

*Excerpts from information provided to the Fort Peck Interpretive Center by David Cook.*

'My dad Clarence Cook and his brother Raymond traveled to Glasgow to look for work during the depression as work was hard to find in Minnesota. They had relatives in Glasgow that encouraged them to come out. Dad initially found work on a ranch until he was hired on at the dam. He was eventually hired as an Oiler on a Dragline while his brother Raymond was hired on a Core Drilling Rig. The dragline operator taught dad to operate the machine and soon dad had a machine of his own. Dad's supervisor at one point was Douglas Moore, the gentleman that died in the "Slide" in 1938 and whose name is on the memorial. My mother said that dad wasn't near the slide, but had just gotten off his shift, before the slide. She said that Raymond was much closer and was working on a Core Drilling Rig, but he wasn't in any real danger. However, a next door neighbor of Raymond's was killed in the slide.

While dad was at Fort Peck he carried on a long distance relationship with a young school teacher from Minnesota. They were married in July of 1938

and they set up housekeeping in Fort Peck. I guess the 'Slide' was a very scary thing to them to happen so soon after being married. In November of 1939 my sister Judy was born in the Glasgow hospital. Shortly after, in December of 1939, the portion of the construction that dad was working on was completed and he was laid off.

In some of his letters to his fiancé, dad told some stories of his time at Fort Peck. One such story is as follows:

"We were working down in Park Grove again today. I'd rather like to keep working there as it's really a good job and there are so many really pretty girls around there. I almost have to have a rope along to keep my Oiler near the machine".

## Donald R. Anderson

Donald Anderson worked for one of the contractors, Addison Miller. He wrote a multi-page account of his time at Fort Peck and this account was provided to the Fort Peck Interpretive Center by Robin Stenovich. Below are excerpts from this account.

My first job was to help unload the huge pilings and "stringers" used in the construction of railroad trestles. They came in on large river barges. We hooked them to cables and a crane took them high in the air and loaded them on logging trucks. One day the operator lost control for a moment and knocked me off the barge and into the fast flowing river. I quickly floated down to some anchor lines, hung on, and fellow workers pulled me out.

Another close call occurred when a bad storm virtually closed down construction. My job then was to carry supplies from one section of our operation to another or to borrow essential items from other companies. Supplies for our workers soon ran short and the commissary division requested I make the trip to Glasgow for supplies. As we neared our camp on the return trip we began to get stuck in the mud." My helper crossed the Missouri on the footbridge to get help and I drove further and crossed on the ferry.

A "cat" operator arrived to help but explained that we'd never make it up the steep grade and it would be necessary to take the trail along the edge of a deep coulee. The powerful "cat" wiggled like a snake and my truck zigzagged along behind pulled by a chain. Suddenly the truck went over the edge and dangled from the end of the chain. Through the windshield I could see the whole back of the caterpillar scratching to stay on the edge of the cliff. Mud poured down on me. Finally the cat was able to dig down to dry earth and started down the trail with the truck dangling below. The side of the truck was torn off but we got safely up on the road again.

Because I was one of the few people who owned a car, my superintendent rented it from me and I earned more money. I was also paid to run errands with my car. Because I was one of the few who owned a car I was very popular with fellow workers.

One day, two of the older men in our barracks asked me to take them to see some friends of theirs. So I took them. When we arrived it was a rather small new building all by itself, quite a distance away from other buildings. Two young women met us at the door, but nobody introduced anybody. I visited with one of the young ladies about the weather and the economy but she soon excused herself and without a word went into another room with the oldest man. Pretty soon the other young lady came up to me with an obvious invite and I jumped up and ran out to the car. Ran is the word!



Donald Anderson at Fort Peck in 1934. Picture donated by Robin Stenovich.



## Esther Anna Sheldon Hitchcock

*From her the memoirs provided by her son Raymond Hitchcock. Esther Hitchcock's husband, Ralph worked at the dam from May 1935 until March 1940. During this time the family lived in the boomtown, Park Grove. Ralph Hitchcock began working in May, and his family joined him in October.*

The first shack (at Park Grove) was a box car type of thing made of one thickness of plywood. No lining; it was the second week of October and we knew before long we would freeze to death in it when cold weather came.

We stayed in the place for a month and then we moved into a new house near to us. It was 12x16 and much better. It was one inch boards with tar paper on the outside and brown paper on the inside. It was built by a man named Sam who owned the town site of Park Grove. He rented it to us for \$10.00 per month. It was banked up with dirt about three feet high all the way around it. We moved into it two weeks before Thanksgiving in 1935.

After Christmas Ralph was laid off. We had a bad blizzard and everything froze up tight and the temperature went to 62 degrees below zero the last part of January. I had washed and put sheets and pillow cases on an outside line. The blizzard froze the clothes as hard as rocks and blew the line down. People were so tired of winter. We had to keep the axe in the house to chop the ice off the crack of the door so we could get out of the house. Bringing the folding bed in the house every night and letting the icicles melt so we could put the bedding on it got old too.

Ralph worked this second summer in the shaft houses up from the tunnels. He made 60 cents an hour that summer which helped us get some things we needed. He bought a 1932 Chevrolet car, and got us a gasoline engine powered washing machine. Oh, Glory be! It was the greatest thing that ever happened to me! It was a Coronado from the Gamble Store in New Deal.

In September of 1938 shortly after the boys were back in school, Jack had come running home from school



*The Hitchcock home at Park Grove. Photo courtesy of Raymond Hitchcock.*

about 1:30 p.m., and I saw him coming and his face looked so terrible, then I saw Gene and Glen coming too. Jack gasped, "Mom, the dam's going out." I looked up at the fill and a huge cloud of dust was over the fill. The children had all been in school after lunch when a man dashed into the school house and said, "Run home to your folks, the dam is going out." The teacher let them all go, and by the time they got home, people were pulling out in cars from every direction.

In just ten minutes everything was bedlam everywhere. We all stood out by the road trying to decide what to do. Two young men in a car came by and stopped. One said, "Lady, do want a ride out?" I said "Yes," and they took us to Wheeler.

We just sat there on the sidewalk in front of a store for over two hours. I was numb. I was sure Ralph was gone. He was working right up on the fill. I thought, "Oh, God, what more can happen to us." We just sat there. Right where Ralph could see us if he came looking for us, and come he did after all. I don't think I was ever so glad to see him in my life!

Ralph saved up enough so we could get a radio in the summer of 1939. It was wonderful for us. The radio was so much entertainment for the children. Jack would run all the way home from school to hear "Jack Armstrong, The all American Boy" each afternoon. There was "Ma Perkins," "Fibber McGee and Molly," and of course, the news. It really was great.

The last part of March 1940 Ralph quit his job and the family moved to Fairfield, Mont. to homestead.

## Lina Lavell Duranleau

*Excerpts from memoirs provided to the Fort Peck Interpretive Center.*

In 1935 I went to Fort Peck where the government engineers were building what was then the largest earthen dam in the world. We lived in Wheeler. My husband (Will Duranleau) walked two blocks from the bus line and would look like a polar bear covered with white frost in just that distance.

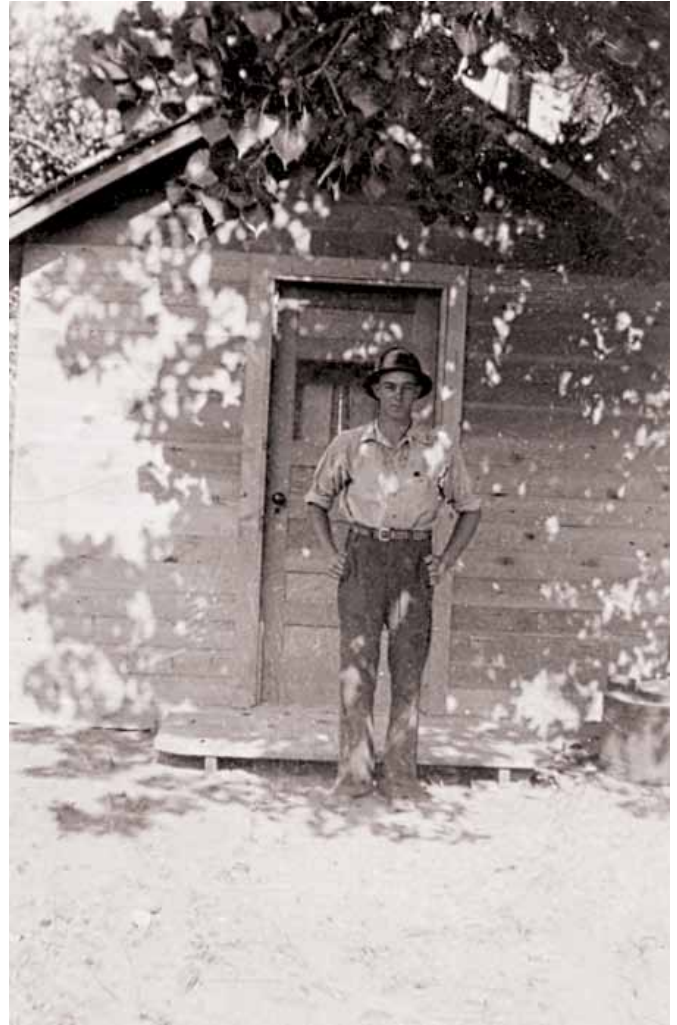
Our water system was two fifty-gallon wooden barrels in our kitchen that were filled from a tank truck that made its rounds every few days. The price was one cent a gallon. It got its refills from a big spring. You can be sure we never wasted any water. With the same water I used to give my daughter a bath, I would take one myself, and then wash out our lingerie. Then I used it to wipe up the floor.

I had lived in eastern Montana all my life but had never seen it as cold as it was the two winters I spent at Wheeler.

## Emil Pederson

*As provided by his sister, Pearl Swank.*

We lived about eight miles north of Circle, Mont. when my brother went to work at the dam. While there, Emil got to know some of the Morrison-Knudsen Company people (one of the contracting companies at the dam), and they asked him to come to their next job, which was in Hawaii. From there he worked for Morrison-Knudsen until he retired, and it led him to places including California, Tennessee, Peru, Brazil and Panama. He was drafted into the Army for a couple of years but they had a job for him as soon as he got out.



*Emil Pederson in front of his home at Park Grove in 1934.*

*Photo courtesy of Pearl Swank.*

## Thelma “Sis” Bondy

“I remember when people were everywhere and it was like a beehive. Things never shut down. I especially remember the workers going 24 hours straight every day, and the pounding on the steel was constant. All night long it was bangedy-bang and no one could sleep.”

# Worker Fatalities

At the peak of construction in 1936 over 10,000 workers were employed on the Fort Peck Project. From the time construction began in late 1933 to its completion in 1940, estimates put the total number of workers between 40,000—50,000 people.

While safety was emphasized, the standards weren't what they are today. That combined with thousands of workers performing new tasks in new situations ended with many injuries and unfortunately many fatalities.

Listed here are the known names of workers who perished in accidents while working on Fort Peck Dam.

## 1933

**Victor Carlson**, 35 - Core Driller. Drowned when a scow crossing the river hit a submerged tree and capsized. From Iron Mountain, Mich., he left a wife and 4-year-old son.

## 1934

**Dan Anderson**, 44 - Shovel Runner. Falling shale crushed him against a power shovel while working at the spillway. He was from Jordan, Mont.

**Adolph L. Berg**, 41 - Tunnel Foreman. Crushed between trucks at the tunnels. From Antelope, Mont., he left a wife and three children.

**Lloyd F. Burke**, 20 - Drill Runner. A pulley on a core drilling rig fell striking him on the head. He was from Scobey, Mont.

**Clarence Eggum**, 23 - Crane Helper. Knocked off a 40-foot trestle when a crane tipped off the trestle. Killed in the same accident that took the life of Oliver Winsky. Eggum was from Richey, Mont.

**Wayne McMillan**, 19 - Tunnel Worker. Hit by a piece of falling shale while operating a jackhammer in the tunnels. He was from Glasgow, Mont.

**Neil F. McNeil**, 52 - Tunnel Worker. A section of shale collapsed on him while he was working in the tunnels. He was a widower from Butte, Mont.

**Martin P. Risa**, 50 - Laborer. Died due to complications from surgery after he fell at a gravel test pit. From Opheim, Mont., he left a wife and seven children.

**Oliver Spracklin**, 31 - Rig Oiler. Caught in the conveyor belt at the tunnels. From Jordan, Mont. he left a wife and son.

**Russell L. Taulbee**, 26 - Rodman. Hit by a train while driving a government car to put up the ribbon for the opening of the Wiotia-Fort Peck Railroad. From Polson, Mont., he had only been working at Fort Peck for three weeks.

**Joseph B. White**, 40 - Laborer on trestle crew. Hit by a beam from a railroad trestle when it blew down in strong winds. He was from Miles City, Mont.

**Oliver Winsky**, 56 - Crane Operator. While operating a crane on top of a 40-foot trestle it tipped off its track and fell to the ground. The same accident took the life of Clarence Eggum. Winsky was from Chicago, Ill., and left a wife and stepdaughter.





## 1935

**Ray A. Berube, 22** - Yard Foreman. Struck by falling boulders dumped from the railroad trestle at the dam. From Sand Point, Idaho, he left a wife and two children.

**George S. Boston, 22** - Laborer. Pinned between two tractors as they passed near each other. He was from Lewistown, Mont.

**Lewis Davis, 35** - Tunnel Worker. Struck by shale falling from a clamshell bucket. He was from Loring, Mont.

**Clarence L. Fry, 22** - Paint Sprayer. Fell beneath an electric locomotive in the tunnels. From Tarkio, Mont., he left a wife and infant child.

**Arthur Kveseth, 43** - Shovel Oiler. Fell between a power shovel and truck while it was being loaded at the spillway. From Froid, Mont., he left a wife and four sons.

**Clarence Livingston, 24** - Driller's Helper. Struck by a section of falling shale in the tunnels. From Hancock, Mo., he left a wife.

**Arthur N. Olson, 24** - Gravel Pit Worker. Died as result of complications after being hit in the chest with a railroad tie at the gravel pit in Cole, Mont.. He was from Halliday, N.D.

**George Peart, 36** - Lineman. Fell 85 feet from a tower for the dredge feeder power line. From Medford, Ore., he had only been working at Fort Peck for four days.

**George W. Rush, 39** - Truck Driver. The frame of the truck he was driving broke pinning him between the motor and the load of shale he was hauling. He was from Essex, Mont.

**Donald W. Swartz, 25** - Lineman. Electrocuted while stringing electrical lines at the spillway. He was a newlywed from Miles City, Mont.

**Emerald K. Wheatley, 23** - Deckhand. Drowned when he fell off a pontoon into the river while moving pontoons from the boatyard. His body was never found. From Circle, Mont., he left a wife and child.

## 1936

**Clarence C. Bernau, 24** - Steel Worker. Fell over 200 feet from the top of the emergency control shafts. He was from Antelope, Mont.

**Sydney G. Conyers, 26** - Shovel Runner. Hit by a shovel bucket when it accidentally dropped. He was from Onawa, Iowa.

**Purl H. Dickson, 47** - Brakeman. Fell from a train in the tunnels. He was from Harlem, Mont.

**Ferdinand L. Hickel** - Drill Runner's Helper. Struck by a mucking machine bucket in the tunnels. From Ray, N.D., he had been working at Fort Peck for a month. Hickel left a wife and two children.

**John H. Hunnewell, 57** - Tunnel Worker. Crushed between trains passing side by side at the tunnels. From Great Falls, Mont., he left a wife and two daughters.



**Wyatt B. Jones**, 31 - Welder. While climbing out of the control shafts, a hammer fell out of the pocket of the man ahead of him, striking him in the head and knocking him off the stairs. He fell 20 feet. Jones was from Crittenden, Va.

**William Stevens**, 31 - Tunnel Driller. Hit by falling shale in the tunnels. He was from Ottsville, Pa.

**Frank E. Torres**, 35 - Tunnel Laborer. Hit by fragments of a steel tank of grouting sand that burst. He was killed in the same accident that took the life of Herbert Young. From Malta, Mont., he left a wife and son.

**Herbert J. Young**, 37 - Steam Boiler Fireman. Hit by fragments of a steel tank of grouting sand that burst. He was killed in the same accident that took the life of Frank Torres. From Dodson, Mont., he left a wife and child.

#### 1937

**Henry C. Annan**, 32 - Lineman. Electrocuted while working on the dredge feeder power line. From Beloit, Kan., he left a wife and 2-year-old daughter.

**Elmo Bailey**, 24 - Handyman. He suffocated in a slide at a spillway sand storage pile. From Glentana, Mont., he left a wife and two children.

**Harry J. Christianson**, 28 - Apprentice Welder. Crushed when a large steel form used in concrete work at the spillway fell on him. He was from Nohly, Mont..

**Glenn Cummings**, 20 - Oiler. Hit by a crane that swung around unexpectedly while he was oiling it. He was from Chinook, Mont..

**Louis Eibon**, 27 - Crane Operator. The crane he was operating tipped over as it swung its load of dirt at the spillway. From Sandstone, Minn., he left a wife.

**Raymond F. Hagen**, 19 - Carpenter's Helper. Fell 150 feet when a spreader jack kicked out and knocked him off a ladder near the top of the emergency control shafts. From Brockton, Mont., he had been married for less than a year.

**Leonard LaJoie** - Watchman. Electrocuted when a live electrical wire touched his hard hat at the gravel pit at Cole, Mont.. From North Dakota, he left a wife and infant daughter.

**John Lindgren**, 40 - Laborer. Caught in the doors of a train car loaded with boulders during the closure of the dam. He was from Wolf Point, Mont.

**Charles B. Reed**, 29 - Rodman. A section of the river bank caved in on him. One of the first workers on the dam, he was from Kansas City, Mo., and left a wife and a child.

**Roland Schumacher**, 25 - Electrician's Helper. Electrocuted while working alone in the emergency control gate substation. It was to have been his last day at work. He was from Menno, S.D.

**Maurice Weinrich**, 27 - Steel Worker. A bucket he and three other workers were riding in fell down the emergency control shaft. From Culbertson, Mont., he left a wife and child.



## 1938

**Oscar Bilstad**, 45 - Brushcutter. Hit by a falling tree while clearing brush. He was a widower from Whitetail, Mont.

**Howard W. Brown**, 54 - Laborer. Hit by a truck as he stepped down from another truck. He had ranched land along the Missouri that was sold to the Government for Fort Peck Lake. He was survived by five children.

**Oliver Bucher**, 58 - Laborer. He was killed in the Slide, his body never recovered. From Hinsdale, Mont., he left a wife and eight children.

**William Chamberlain**, 24 - Snake Butte Worker. Crushed when caught between an electric shovel and a rock. He was from Harlem, Mont.

**John I. Johnson**, 25 - Motorboat Operator. He was killed in the Slide, his body never recovered. He was from Dodson, Mont.

**Jesse L. Kimmel**, 35 - Snake Butte Worker. Crushed in a rock slide at Snake Butte. From Wolf Point, Mont., he left a wife and four children.

**Gregory E. Leichner**, 31 - Booster Car Oiler. Electrocuted while oiling a switchboard panel on the booster car. He was from Cathlamet, Wash.

**Walter Lubbinge**, 29 - Drill Runner's Helper. He was killed in the Slide, his body never recovered. He lived in New Deal.

**Archie Moir**, 26 - Deckhand. He was killed in the Slide, his body never recovered. He was from Hinsdale, Mont.

**Douglas J. Moore**, 35 - Associate Superintendent. He was killed in the Slide. From DuBois, Pa., he left a wife.

**Dolphie Paulson**, 51 - Laborer. He was killed in the Slide, his body was never recovered.

**A.E. Phares**, 24 - Drill Helper. Crushed by a falling rock after blasting at Snake Butte Quarry. From Harlem, Mont., he left a wife and two sons.

**Albert Stoeser**, 23 - Deckhand. He was killed in the Slide. From Glasgow, Mont., he left a wife.

**Nelson P. VanStone**, 31 - Foreman. He was killed in the Slide. His body was never recovered. He left a wife and two children.

## 1939

**William H. Mackey**, 26 - Tunnel Worker. Crushed by a concrete hopper that broke loose while pouring concrete at the tunnels. He was from Malta, Mont.. His father's farm had been sold to the Government for Fort Peck Lake.

## 1940

**Delbert L. Beardsley**, 59 - Fort Peck Railroad Engineer. He died of a heart attack after a fall at work. He left a wife and six children.





